ZAVALKOVSKY, et al., Ser. No. 09/675,980
GAU: 2155, Examiner Kevin T. Bates
Reply to Final Office Action with Request for Continued Examination

REMARKS

The Examiner thanked for the performance of a thorough search.

Claims 1, 3, 5, 7, 9, 11, 13, 14, 24, 25, 41, 42, 58, and 59 have been amended.

Claims 19-20, 36-37, and 53-54 have been canceled. No claims have been added. Hence,

Claims 1-18, 21-35, 38-52, and 55-65 are pending in the application.

Each issue raised in the Office Action mailed September 14, 2005 is addressed

hereinafter.

I.   INTERVIEW SUMMARY

The Examiner is thanked for extending the courtesy of the telephone interview

held on November 4, 2005 to the Applicants' representatives Christopher Palermo and

Stoycho Draganoff. In a communication mailed November 8, 2005, the Examiner has

provided an Interview Summary that appears accurate and is adopted herein. For this

reason, the Applicants understand that it is not necessary to provide a separate Summary

of Record of Interview at this time.

II.   REJECTIONS BASED ON THE CITED ART

A.   INDEPENDENT CLAIM 1

Independent Claim 1 has been rejected under 35 U.S.C. § 102(e) as allegedly

anticipated by Pandya et al., U.S. Patent No. 6,671,724 ("PANDYA").

Claim 1 has been amended herein according to the proposed amendment

discussed during the telephone interview on November 4, 2005. As indicated in the

Interview Summary provided by the Examiner in the communication mailed on

November 8, 2005, this amendment to Claim 1 overcomes the rejection over PANDYA.

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Specifically, PANDYA teaches a system in which agents are executing on a device that is connected to a network. The agents control the transmission of data from the device by throttling messages of a traffic flow between applications executing on the device and the network link that connects the device to the network. (See PANDYA, col. 11, lines 16-20.) In particular, the agents throttle the traffic flow by placing messages in queues that are associated with different transmission priority. (See PANDYA, FIG. 9, queues 132a and 132b; col. 11, lines 47-65). With reference to the OSI protocol layer stack, the PANDYA agents are interposed between the application and the transport protocol layers of the communication protocol stack of the device. (See PANDYA Col. 10, lines 12-51.) Thus, the PANDYA system clearly teaches that the messages of traffic flows being throttled either originate from, or are sent to, an application that is executing at the application layer of the device on which a PANDYA's agent is installed.

In contrast, Claim 1 includes the features of receiving a group of one or more packets of a data flow at a network element in the network, marking the packets with behavioral treatment values, and forwarding (transmitting) the packets from the network element to the next hop in the network. Thus, Claim 1 clearly indicates that the groups of one or more packets that are being marked with behavioral treatment values are packets that are processed by the network element for the purpose of forwarding these packets to other network elements in the network; in contrast to PANDYA, these groups of packets do not originate from, and are not sent to, an application that executes at the application layer of the communication protocol stack of the network element.

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Further, PANDYA does not teach the features of Claim 1 of marking packets of a data flow with behavioral treatment values.

Specifically, while PANDYA makes vague, non-specific references to a Quality-Of-Service (QoS) mechanism, PANDYA does not describe marking of packets of a data flow with behavioral treatment values. In fact, PANDYA teaches that since the known QoS mechanisms monitor traffic flows at the transport layer and below, the QoS mechanisms are very limited in their ability to provide application-aware network traffic control. (See PANDYA, col. 3, lines 1-17.) To overcome this problem, the PANDYA system uses agents that are interposed, and monitor data flows, between the application and transport protocol layers of the communication protocol stack of a network device. Numerous passages in PANDYA tout the advantages of the PANDYA system and expressly point out the disadvantages of mechanisms that mark packets. (See for example PANDYA, col. 3, lines 1-17; col. 9, lines 60-65; col. 10, lines 32-34; col. 15, lines 18-22.) Thus, if anything PANDYA teaches away from the approaches claimed in the present application. Significantly, PANDYA does not teach, describe, or suggest, that agents or any components of the agents mark packets that are transmitted in the network with any behavioral treatments values; the reason for this is that, since the PANDYA agents already control all the traffic transmitted by a network device by means of transmission priority queues, there is no need use mechanisms that employ packet marking.

Finally, the features in Claim 1 further clarify that a subsequent group of one or more packets of the same data flow is dynamically marked at a network device with a second behavioral treatment value, which is determined based on the achieved flow

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bandwidth of the data flow and the packet flow characteristics of a previous group of packets that passed through the network device. In addition, Claim 1 also features repeating the steps of the claim for successive groups of packets of the data flow, where each of the successive groups is dynamically marked with a behavioral treatment value that is determined based at least in part on a successively determined achieved flow bandwidth of the data flow. In contrast, PANDYA includes no teaching or suggestion of such steps.

For the reasons set forth above, and as discussed in the telephone interview on November 4, 2005, PANDYA does not describe, teach, or suggest all features of Claim 1. Thus, Claim 1 is patentable under 35 U.S.C. § 102(e) over PANDYA. Reconsideration and withdrawal of the rejection of Claim 1 are respectfully requested.

B.   INDEPENDENT CLAIMS 5, 9, 13, 14, 24, 25, 41, 42, 58, AND 59

Claims 5, 9, 13, 14, 24, 25, 41, 42, 58, and 59 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by PANDYA.

As amended, Claims 5, 9, 13, 14, 24, 25, 41, 42, 58, and 59 include features similar to the features of Claim 1 discussed above. For this reason, Claims 5, 9, 13, 14, 24, 25, 41, 42, 58, and 59 are patentable under 35 U.S.C. § 102(e) over PANDYA for at least the reasons given above with respect to Claim 1.

C.   DEPENDENT CLAIMS 2-4, 6-8, 10-12, 15-18, 21-23, 26-35, 38-40, 43-

52, 55-57, AND 60-65

Claims 3, 7, 11, 15-17, 27-28, 31-34, 44-45, 48-51, 61-62, and 65 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by PANDYA.

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Claims 2, 6, 10, 18, 26, 35, 43, 52, and 60 have been rejected under 35 U.S.C. §

103(a) as allegedly unpatentable over PANDYA in view of Koskelainen et al, U.S.

Patent. No. 6,570,851 ("KOSKELAINEN").

Claims 22, 39, and 56 have been rejected under 35 U.S.C. § 103(a) as allegedly

unpatentable over PANDYA in view of Dillon et al., U.S. Patent No. 6,473,793

("DILLON").

Claims 23, 40, and 57 have been rejected under 35 U.S.C. § 103(a) as allegedly

unpatentable over PANDYA in view of Bushmitch, U.S. Patent. No. 5,928,331

("BUSHMITCH").

Claims 29, 30, 46, 47, 63, and 64 have been rejected under 35 U.S.C. § 103(a) as

allegedly unpatentable over PANDYA in view of Haddock et al., U.S. Patent. No.

6,104,700 ("HADDOCK").

Claims 21, 38, and 55 have been rejected under 35 U.S.C. § 103(a) as allegedly

unpatentable over PANDYA in view of Ordanic et al, U.S. Patent. No. 5,751,964

("ORDANIC").

Each of Claims 2-4, 6-8, 10-12, 15-18, 21-23, 26-35, 38-40, 43-52, 55-57, and 60-

65 is dependent upon one of independent claims 1, 5, 9, 13, 14, 24, 25, 41, 42, 58, and 59,

and thus includes each and every feature of the corresponding independent claim.

Furthermore, in rejecting Claims 2, 6, 10, 18, 21-23, 26, 29-30, 35, 38-40, 43, 46-47, 52,

55-57, 60, and 63-64 the Office Action relies explicitly on PANDYA, and not on any of

the other cited references, to show the features discussed above with respect to

independent Claims 1, 5, 9, 13, 14, 24, 25, 41, 42, 58 and 59. Since as discussed above

PANDYA does not disclose all features of the independent claims, any combination of

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PANDYA with the other references necessarily fails to teach all the features of Claims 2, 6, 10, 18, 21-23, 26, 29-30, 35, 38-40, 43, 46-47, 52, 55-57, 60, and 63-64. Therefore, each of the dependent Claims 2-4, 6-8, 10-12, 15-18, 21-23, 26-35, 38-40, 43-52, 55-57, and 60-65 is allowable for the reasons given above for its corresponding independent claim.

In addition, each of claims 2-4, 6-8, 10-12, 15-18, 21-23, 26-35, 38-40, 43-52, 55-57, and 60-65 introduces one or more additional features that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case a separate discussion of those features is not included at this time. Therefore, it is respectfully submitted that Claims 2-4, 6-8, 10-12, 15-18, 21-23, 26-35, 38-40, 43-52, 55-57, and 60-65 are allowable at least for the reasons given above with respect to Claims 1, 5, 9, 13, 14, 24, 25, 41, 42, 58, and 59.

III.   CONCLUSION

The Applicants believe that all issues raised in the Office Action have been addressed. Further, for the reasons set forth above, the Applicants respectfully submit that allowance of the pending claims is appropriate. Reconsideration of the present application is respectfully requested in light of the amendments and remarks herein. Entry of the amendments is respectfully requested in light of the Request for Continued Examination (RCE) that is filed concurrently herewith.
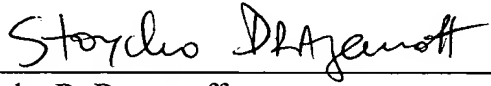
The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

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A petition for extension of time, to the extent necessary to make this reply timely filed, is hereby made. If applicable, a law firms check for the petition for extension of time fee is enclosed herewith. If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to charge any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Dated: November 28, 2005

Stoycho D. Draganoff
Reg. No. 56,181

2055 Gateway Place, Suite 550
San Jose, California 95110-1089
Telephone No.: (408) 414-1080 ext. 208
Facsimile No.: (408) 414-1076